Exploring Psychotherapists' Attitudes on Internet- and Mobile-Based Interventions in Germany: A Thematic Analysis

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Table of Contents

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Abstract

Background: In recent years, internet- and mobile-based interventions gained relevance in mental health care. Psychotherapists' perspectives are crucial in identifying potential improvements as well as barriers to the implementation of these interventions.

Objective: This study aimed to explore psychotherapists' perspectives on the barriers and facilitating conditions to internet- and mobile-based interventions.

Methods: The study consisted of a qualitative research design, utilizing open items on a cross-sectional survey. In total, 350 psychotherapists were asked to provide their opinion on different aspects of internet- and mobile-based interventions in written form. Thematic analysis was used to analyze the data and to identify core themes.

Results: The analysis revealed 11 core themes on using internet- and mobile-based interventions, falling into the four superordinate categories: 1) "Applicability" ("Disorder-related Limitations", "Facilitating Structures", "Psychotherapeutic Specialization", "Role in Mental Health Care"); 2) "Treatment Resources" ("Lack of Information", "Costs and Efforts"); 3) "Technology" ("Technical Constraints", "Technical Requirements and Functions", "Data Protection and Privacy"); and 4) "Perceived Risks and Barriers" ("Perceived Risks and Barriers for Patients", and "Perceived Risks and Barriers for Psychotherapists").

Conclusions: The findings of this study highlight the need for considering psychotherapists' attitudes in the conceptualization of internet- and mobile-based interventions. It is discussed how these findings can advance both the use of internet- and mobile-based interventions in mental health care and the societal debate revolving around it. Limitations and implications for future research are discussed.

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Exploring Psychotherapists' Attitudes on Internet- and Mobile-Based Interventions in Germany: A Thematic Analysis

Short title: Psychotherapist's attitudes on e-health

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Abstract

Background: In recent years, internet- and mobile-based interventions (IMIs) have gained relevance in mental health care and elicited societal debates. Psychotherapists' perspectives are crucial in identifying potential opportunities for improvements, facilitating conditions, and barriers to the implementation of these interventions.

Objective: This study aimed to explore psychotherapists' perspectives on opportunities for improvements, facilitating conditions and barriers to using internet- and mobile-based interventions.

Methods: The study consisted of a qualitative research design, utilizing open items on a cross-sectional survey. In total, 350 psychotherapists were asked to provide their opinions on various aspects of internet- and mobile-based interventions in written form. Thematic analysis was used to analyze the data and identify core themes.

Results: The analysis revealed 11 core themes on using internet- and mobile-based interventions, falling into the four superordinate categories "Applicability", "Treatment Resources", "Technology", and "Perceived Risks and Barriers". While many psychotherapists highlighted IMIs as a welcome support in conventional psychotherapy, they were skeptical when regarding IMIs as a substitute. Several factors like technological issues, subjective concerns regarding potential data protection risks, a lack of individualization due to the manualized nature of most IMIs, and high timely and financial costs for psychotherapists and patients were perceived as hindering factors for the applicability in clinical practice. They wished for easily accessible information on evidence and programs to decrease the time and effort necessary for training and pleaded for those information to be included in the conceptualization of new IMIs.

Conclusions: The findings of this study highlight the need for considering psychotherapists' attitudes in the development, evaluation, and implementation of internet- and mobile-based interventions. In the current study, psychotherapists were aware of both opportunities and risks regarding the use of IMIs, and most of them agreed that IMIs were a tool to support traditional

psychotherapy rather than a substitute for it. Furthermore, it remains important to include psychotherapists in the discussion regarding IMIs in particular and the development of new methodologies in psychotherapy in general. Overall, the current can advance the use of internet- and mobile-based interventions in mental health care and contribute to the ongoing societal debate surrounding them.

Keywords: e-Health; psychotherapy; psychotherapists' perspectives; thematic analysis; internet- and mobile-based intervention

Introduction

In recent years, e-health has gained high importance in the field of psychotherapy. Part of this trend is the development of internet- and mobile-based interventions (IMIs) targeting various somatic diseases and psychological disorders [1]. These interventions consist of self-guided applications and different levels of psychotherapeutic support (e.g., stand-alone or blended care approaches [1–3]), that are readily provided almost anywhere and anytime [4]. In Germany, health insurance covers the costs for certain IMIs in the form of mobile applications (Digitale Gesundheitsanwendungen) after they have been inspected by the Federal Institute for Drugs and Medical Devices [5]. Technological advancements such as virtual reality, gamification techniques, wearable devices, and chatbots can further expand the applicability of IMIs and the range of users they can benefit [3,6–8].

Although the effectiveness and efficacy of some IMIs need further examination, other IMIs have been shown to reduce symptom severity [9–11]. While many IMIs incorporate basic cognitive behavioral therapy (CBT) interventions [2,3,8], studies have found psychodynamic approaches to be promising [12,13].

The main goal behind the development of IMIs is to overcome barriers to mental health care supply (e.g., the global health treatment gap [14]). This was especially important during the COVID-19 pandemic, where treatments that do not require in-person contact like video therapy and IMIs were necessary to prevent the spread of infections [15–17]. Previous studies have identified several

challenges associated with video therapy, including establishing emotional connections, managing distractions during sessions, patients' privacy, and setting boundaries for therapists [15]. Depending on the country's insurance system, the financial aspect not only plays a role for the individual but also has a societal impact. IMIs could potentially improve the cost-effectiveness of provided care, and resource distribution, and reduce the burden on the mental health care system [18,19]. Especially during the COVID-19 pandemic, digital treatment options were seen as a way to distribute accessible and safe mental health care. At the same time, it must be emphasized that despite its promising opportunities and already existing facilitating conditions, there may also be potential risks in the implementation and use of IMIs. Concerns that have previously been identified were a lack of direct professional involvement and the accompanying risk of misuse or even harm in cases of severe or comorbid mental health conditions [20,21]. As an increased use of IMIs might successively change the provision of mental health care, its future is shaped by clinical research on both the treatment efficacy and the experiences of all stakeholders.

While there is a fundamental body of research on the efficacy of IMIs [21] and how patients can profit from their use [22], comparatively less is known about how psychotherapists perceive the use of IMIs in their professional practice. This is especially troublesome, considering that the work of psychotherapists is massively impacted by the rise of IMIs. Previous research targeting psychotherapists' perspectives on certain IMIs suggests that psychotherapists might perceive them as a welcomed support [23]. As such, IMIs were identified as a tool to potentially gain more work-time control [24] or suitable for integration in certain psychotherapeutic interventions [25,26]. However, there are also concerns regarding IMIs and their potential role in therapy [23]. For example, some worried that IMIs might be intended as a substitute for professional treatment or that they may reduce the personalized alliance between therapist and patient to a rather mechanistic algorithm [20,23]. While these studies provided valuable insights, most of the implications were derived from trials targeting specific IMIs, raising doubts about whether the findings can be generalized to a larger

population of psychotherapists who encounter a wide variety of IMIs in their daily practice. In order to allow successful further integration of technological aid in psychotherapy, it is indispensable to incorporate the opinions and experiences of psychotherapists, as the use of IMIs raises a list of professional and ethical considerations.

There are existing studies that investigate how psychotherapists perceive the use of IMIs [20,23]. However, these studies often have small sample sizes or are limited to specific interventions in randomized controlled trials [20]. As IMIs are still viewed with uncertainty by psychotherapists, their opinions will require further comprehensive investigation. This requires bigger samples and diverse psychotherapeutic orientations and scenarios of IMI application. This will provide a robust accumulation of attitudes, ultimately identifying the challenges and risks and facilitating further development of IMIs and their integration into the psychotherapeutic practice. This study aims to explore the attitudes and opinions of various psychotherapists on IMIs in a bottom-up fashion. Since psychotherapists are among the primary providers of IMIs, the results of the present study can help ensure that the considerations of psychotherapists are represented in the design of future IMIs. This can potentially facilitate the use and applicability of the respective interventions. To achieve this goal, psychotherapists were asked to answer an online survey with open questions regarding their attitudes toward multiple aspects of IMIs. Their responses were later analyzed with thematic analysis.

Methods

Participants and Procedure

For recruitment, licensed psychotherapists and psychotherapists in training of any approved psychotherapeutic specialization that is supported by German health insurance (CBT, psychodynamic therapy, analytical psychotherapy, and systemic psychotherapy) were contacted via mail (e.g., distribution lists of universities, training institutes, and professional associations), colleague

networks, and social media. This contact already included information on the study design, the research topic, and a link to access the online survey. Upon opening the link to the survey, detailed information was provided, and written informed consent was obtained. A total of 350 psychotherapists anonymously completed the questionnaire via Limesurvey 3.28.18 (Limesurvey GmbH). After completion, participants could partake in a draw for three places in a workshop on digitization and technical security in psychotherapy at the University of Siegen. No additional compensation was provided. The study protocol (12/2021) was approved by the Ethics Committee of the University of Siegen (reference number: LS_ER_57). Data collection took place in 2021 and 2022, during the COVID-19 pandemic.

Materials

The survey consisted of demographic questions to assess the participants' age, gender, license, psychotherapeutic orientation, workplace setting (e.g., inpatient and outpatient settings), and questions regarding prior usage of IMIs (for questions regarding prior usage, see supplementary material). To explore the psychotherapists' attitudes towards IMIs, 14 open questions were administered (for a selection of the administered questions see Table 1, for the full list, see supplementary material). These questions covered the topics of social influence, barriers, risks and challenges, facilitating conditions, opportunities, desirable functions, and concerns regarding psychotherapeutic orientations. The questions were based on the Unified Theory of Acceptance and Use of Technology (UTAUT) [27,28], which incorporates components such as Social Influence and Facilitating Conditions. We also addressed negative aspects of Performance Expectancy and Effort Expectancy by asking questions about challenges, requirements, and deficiencies. This approach allowed for gathering findings without overly limiting the investigation. All items were presented in German and reviewed by two independent clinical psychologists for face validity.

Table 1

Examples of the open questions concerning psychotherapists' attitudes towards IMIs, administered

in an online survey between 2021 and 2022.[a]

Items
Does your working environment support the use of new technologies and if so, how?
Was there something that kept you from using IMIs in your psychotherapeutic practice and if so, what?
What challenges could the use of IMIs encounter?
Which requirements need to be met for you to use IMIs in your psychotherapeutic practice?
What functions should IMIs include to become useful for you in psychotherapy?
Are there psychotherapeutic orientations for which IMIs are (particularly/rather not) suited and if so, which?

[a] A selection of the administered questions. All questions and a definition of internet- and mobile-based interventions given to psychotherapists can be found in the supplementary material.

Ethical considerations

The study protocol (12/2021) was approved by the Ethics Committee of the University of Siegen (reference number: LS_ER_57). Data collection took place in 2021 and 2022, during the COVID-19 pandemic. Informed consent was obtained from each participating before enrollment. Participation was entirely voluntary, and participants had the right to withdraw their consent at any time. Data was anonymized with a trial identification number. It was saved on a secure, self-encrypting database and was accessible only to the responsible researchers. No identification of individual participants should be possible due to pseudonymization, and no personal information or images were gathered. Participants were not financially compensated for their participation, however, they were able to participate in a draw for three places in a workshop on digitization and technical security in psychotherapy at the University of Siegen.

Data Analysis

For the demographic variables, means, standard deviations, and frequencies were estimated.

A thematic analysis was conducted using the responses of psychotherapists to the open survey items [25,26]. All answers were sorted according to the participants' responses and entered in the text analysis program MAXQDA (VERBI, MAXQDA). Two independent coders followed a step-by-step analysis procedure for psychological thematic analysis [29,30]. The first coder reviewed all entries and created different codes for the answer categories from the data in an inductive manner. The second coder then assigned any remaining data entries to these codes. Codes were structured based on their content, not by the question they were derived from. This meant that two data entries could be coded in the same code, even if they were derived from different questions as long as their content matched. The second coder merged codes into higher-ranked themes (later addressed as core themes), if applicable. Afterwards, both coders diligently reviewed the coding system, its categories, and the corresponding entries. Since the analysis method used is exploratory, no research hypotheses or predictions were established beforehand. Both coders defined and interpreted the core themes and sub-themes along with their corresponding codes. The quotations used in the results sections have been translated from German to English and checked for accuracy.

Results

Demographics

The sample consisted of 80 (23.1%) male and 267 (76.9%) female participants with a mean age of 42.83 (*SD* = 12.16). The median completion time for the survey was 17 minutes.

For more information see Table 2.

Table 2

Demographic description of the study sample in this qualitative study conducted between 2021 and 2022 in Germany, consisting of N = 350 psychotherapists.

		Total	Female	Male
N (%)		350	267 (76.3)	80 (22.9)
Age, mean (*SD*[a])		42.8 (12.2)	41.8 (11.8)	46.3 (13.3)
Licensed (%)		269 (76.9)	203 (76.0)	63 (78.8)
Therapeutic orientation	CBT[b] (%)	303 (86.6)	232 (86.9)	68 (85.0)
	PD[c] (%)	30 (8.6)	21 (7.9)	9 (11.3)
	AP[d] (%)	9 (2.6)	7 (2.6)	2 (2.5)
	Systemic (%)	3 (0.9)	3 (1.1)	0
	Other (%)	5 (1.4)	4 (1.5)	1 (1.3)
Therapeutic setting	Outpatient (%)	304 (86.9)	236 (88.4)	69 (86.3)
	Inpatient (%)	16 (4.6)	9 (3.4)	5 (6.3)
	Other (%)	6 (1.7)	4 (1.5)	0
	Multiple (%)	24 (6.9)	18 (6.7)	6 (7.5)

[a] SD: Standard deviation.

[b] CBT: Cognitive behavioral therapy.

[c] PD: Psychodynamic therapy.

[d] AP: Analytical psychotherapy.

Compared to data from the Federal Health Monitoring System Germany, the sample of licensed psychotherapists in this study was representative in terms of gender (female: 76.3%; male: 23.7%) and work setting (outpatient: 77.48%, 76.28% of females, 80.18% of males) of licensed German psychotherapists [31].

Prior Experience with IMIs

Regarding the use of IMIs, 92 (26.29%) psychotherapists reported already prescribing them, while 221 (63.1%) had not yet used IMIs. Overall, 772 prescriptions were reported by these

psychotherapists (see Figure 1 for details regarding different prescriptions). They also reported an estimated dropout rate of 48.39% for IMIs, which was slightly higher than the dropout rates of approximately 40% observed in conventional psychotherapy studies [32,33].

Figure 1

Number of prescriptions regarding internet- and mobile-based interventions prescribed by psychotherapists (n = 92 of the full sample) prior to 2021/2022. The prescriptions were sorted by disorder.

Please insert Figure 1 about here

Thematic Analysis

Through the thematic analysis of answers to open questions by 350 psychotherapists' on this survey, 11 core themes emerged: 1) Disorder-related Limitations, 2) Facilitating Structures, 3) Psychotherapeutic Specialization, 4) Role in Mental Health Care, 5) Lack of Information, 6) Costs and Efforts, 7) Technical Constraints, 8) Technical Requirements and Functions, 9) Data Protection and Privacy, 10) Perceived Risks and Barriers for Patients, and 11) Perceived Risks and Barriers for Psychotherapists. These themes were sorted into four overarching categories: Applicability of IMIs, Treatment Resources, Technology, and Perceived Risks and Barriers. Overall, psychotherapists had mixed opinions and experiences regarding the use of IMIs. Quotations of the answers given by psychotherapists on the survey items appear in italics in the respective sections. Figure 2 provides detailed information regarding the four categories identified and the respective core themes.

Figure 2.

A thematic map of the 4 categories and the respective core themes derived from the qualitative answers provided by the N = 350 psychotherapists in response to the open questions (see Table 1).[a-b]

Please insert Figure 2 about here

[a] Circles: Categories.

[b] Boxes: Core Themes.

Applicability of IMIs

Disorder-related Limitations

Psychotherapists have voiced concerns about the limited applicability of disorder-related treatments. They felt that IMIs were least suitable for treating psychosis and personality disorders.

> *"Personality disorders, for example. I fear that the relational component is missing in order to actually make a change. Apart from that, for me, it depends on the severity of the disorder. As an additional tool during psychotherapy, I would not exclude any group of disorders."* (T139, W, 29)

Several psychotherapists additionally mentioned (severe) depression, post-traumatic stress disorder, disorders concerning relationships (e.g., social interactions or intimate sexual contact), anxiety disorders, dissociative disorders, addiction, and bipolar disorder.

> *"Psychosis, personality disorders, many forms of depression with a biographical-traumatic origin, and obsessive-compulsive disorders - all require direct human contact for effective treatment."* (T217, M, 23)

As general characteristics, suicidality, acute crisis, comorbidity, high complexity and severity, and a lack of cognitive abilities were mentioned as circumstances under which they would refrain from

using IMIs in the therapy they provide. For certain disorders (e.g., social anxiety disorder, obsessive-compulsive disorder), psychotherapists feared that IMIs might even reinforce avoidance behavior.

> "*[Using IMIs] could be part of an avoidance strategy. and are basically [not suited] for all disorders, where the bond with the therapist is central*." (T129, W, 32)

In contrast, psychotherapists indicated that IMIs could be especially suitable for patients with mild symptom severity or highly motivated and autonomous patients. Overall, most psychotherapists reported that suitability should be decided on a case-based, individual level and not rely on the diagnosed disorder(s) alone.

Facilitating Structures

Therapists also commented on the structures that facilitate the applicability of IMIs. Most of the participating psychotherapists stated that their employers already supported the use of new technology in therapy. This support included enabling video therapy, offering technical support and training programs, and providing the necessary soft- and hardware. Some employers even implemented feedback systems, online diagnostics, and promoted digitalization in psychotherapy. Additionally, health insurance companies were seen as supporting computer-based therapy as they compensated patients for costs related to video therapy and IMIs. Since 86.9% of psychotherapists worked in independent practices, they had the autonomy to decide whether to implement IMIs and video therapy into their therapeutic work.

> "*I am self-employed and open to supportive and data-protected technologies*." (T37, W, 56)

This would provide them with opportunities to use IMIs but also require them to take responsibility for implementation. Especially for self-employed psychotherapists, the lack of financial compensation for time spent on training in respective IMIs was a problem.

> *"Getting accustomed to the apps costs time and money."* (T273, W, 41)

While several psychotherapists mentioned being open to using IMIs in their practices and discussing them with colleagues, others explicitly stated their lack of support. They cited issues with compensation, personal preference, or ideological reasons.

Psychotherapeutic Specialization

Most psychotherapists felt that IMIs would be most applicable in CBT interventions compared to any other form of therapy. Psychoanalysis was considered the least suitable for IMIs, closely followed by psychodynamic therapy. This was due to the specific techniques used in these styles and the emphasis on the therapeutic relationship in treating disorders.

> "*[IMIs] are better suited for CBT than for psychodynamic or analytic therapy, as for the latter, the personal relationship is more important than in CBT*". (T159, W, 30)

> "*Together with the patient, the therapist can acquire and realize unconscious conflicts better than an application.*" (T38, W, 35)

Systemic therapy was also seen as less appropriate with IMIs, given the importance of relationship systems in psychotherapeutic interventions.

Role in Mental Health Care

The integration of IMIs in mental health care and their role were addressed by many psychotherapists. They saw IMIs as a useful addition for conducting therapeutic exercises at home or as a tool for bridging waiting times (e.g., by providing first-line psychoeducation and an introduction to therapy).

> "*[IMIs] probably have the potential to help between the intake session and the start of the treatment in order to prepare the therapy. Sadly, they are misused as a political tool in order to disguise the shortage of treatment capacities. Simply because of that, it is, in my opinion, damaging both for patients and therapists to use [IMIs], as rather nothing will change about the shortage of treatment capacities."* (T325, M, 34)

> "[*IMIs] are a great supplement to psychotherapy.*" (T54, W, 34)

However, it has been criticized that governmental institutions do not clearly communicate the goals that should drive the development of IMIs. The majority of psychotherapists cannot imagine IMIs being an effective substitute for face-to-face psychotherapy and should not be seen as such.

> "*As a stand-alone, it is rather a low-threshold service for prevention.*" (T54, W, 34)

In fact, psychotherapists worried that IMIs might be intended to further cut mental health expenses from insurance companies by substituting therapy sessions.

> "*There is too much focus on quickly treating as many people as possible instead of considering the cause of the high increase of psychological disorders. For example, precarious work conditions, isolation, or anonymity.*" (T20, W, 33)

It was emphasized that IMIs could not replace the therapeutic relationship, which "*is known to be an important effect factor for the success of psychotherapy*" (T87, W, 36). They felt that IMIs (especially when used as stand-alone treatment) might provide a more economically driven solution to the rising need for psychotherapy. However, this might lead to a reduction in psychotherapists funded by health insurances and a decrease in their value.

Treatment Resources

Lack of Information

One core theme that emerged was the "Lack of Information" on IMIs. Psychotherapists reported having a lack of knowledge and available information on two main aspects: 1) the content and applicability of IMIs, and 2) the efficacy of IMIs. Gaining knowledge on the content and applicability was experienced as a high effort, as they are often only distributed by attending specific seminars or contacting developers.

> "*Unless a provider is contacted directly, only an introduction or information material is handed out, and, if necessary, a trial access is granted. There is little detailed information online about the IMIs, so that patients cannot really be well informed*". (T299, W, 37)

The lack of information was especially problematic, given the perceived number of available applications. Furthermore, psychotherapists issued that the scientific foundation of IMIs was not well communicated.

"*[There is a] lack of or insufficient evidence of effectiveness*". (T91, W, 41)

This lack did not allow a feasible transfer into psychotherapeutic practice. As a possible solution, many suggested the need for more readily accessible information (e.g., short presentation videos, tutorials, booklets, and recommendation systems). Others mentioned the need for more training opportunities and access to applications for testing. Some also expressed concern about false information and advertisements, which could heighten patients' expectations and ultimately lead to disappointment.

Costs and Efforts

High costs and efforts were addressed by psychotherapists as another core theme. They expressed that a decent amount of time and resources are needed for (initial) training, prescription, and accounting.

"*It is an additional effort in an already loaded workday.*" (T155, M, 57)

This was perceived as problematic as health insurance companies do not compensate psychotherapists for the working hours spent on these tasks. Psychotherapists worried that economic interests might be put above patients' needs.

> *"Economic interests/lobbyism are so high that scientific evaluation and user experiences are annulled. Regarding the limited resources in the health care system, this is not justifiable."* (T272, M, 40)

Psychotherapists expressed the wish for more support from insurance companies, such as compensation for the time they invest in testing, prioritizing patients' needs, making applications more affordable, and simplifying the prescription processes). In addition to needing more accessible information, psychotherapists emphasized the need for " *permanent, free, and complete access for psychotherapists*" (T228, W, 31) in order to adequately assess the respective IMI.

Technology

Technical Constraints

Another core theme that emerged was "Technical Constraints" interfering with the treatment experience. Psychotherapists expressed their worries about an unequal digital infrastructure among patients, which potentially complicates the adequate use of IMIs.

> "*Part of my patients (countryside, elderly) do not own a smartphone or are not really familiar with it. The quality of the internet connection still is lacking on the country-side. Unbelievable, in 2022*." (T200, M, 65)

Additionally, it was mentioned that the use of IMIs might lead to increased screen time.

> "*Many of my patients spend a lot of time with technical devices. Oftentimes, the private smartphone is used for occupational matters, so that they never [relax]. If now a treatment*

application additionally is used digitally, it again is a reach to the smartphone and a missing break for the brain." (T114, W, 43)

Psychotherapists emphasized that technical problems would consume time that could otherwise be spent on direct patient contact.

"*Time and content is going missing when technical problems arise and it takes space that deflects the attention away [from therapy]*." (T277, W, 34)

Technical Requirements and Functions

Psychotherapists have expressed that IMIs should have certain features as technical requirements and functions. Specifically, they highlighted three crucial aspects of technical requirements and functions in IMIs: 1) high usability, 2) possibilities for customization, and 3) data protection.

Firstly, they considered a user interface (UI) that is as "*intuitive as possible*" (T90, W, 54) to be crucial for the applicability of IMIs.

Secondly, they stressed the need for IMIs to be customizable. Psychotherapists wanted the components of IMIs to be tailored to a patient's individual needs (e.g., modular system, where modules and exercises could be chosen by the psychotherapist/patient)

"*A possibility is required to assemble an individual program (relaxation, mindfulness, etc.)*". (T140, W, 29)

They also requested a customization option for the UI (e.g., different voice options for tutorials and modules, and support for multiple languages).

Thirdly, psychotherapists expressed concerns about data protection. They stressed the need to assure patients that their data will be kept safe and secured, with measures in place to prevent misuse. They also emphasized the importance of adding the option to fully delete data if needed. Additionally, they indicated that patient should have full control over their data, and informed consent should be sought before using patients' data.

> "*Patients should have the option to give access to their therapists regarding their learning status or symptom diary*." (T32, W, 37)

Some psychotherapists also stated that IMIs should include components that allow interaction between psychotherapists and patients, diaries and protocols, video and/or sound recording, feedback systems, and emergency functions (see supplementary material for additional functions). In terms of platform, some psychotherapists preferred web-based applications that are accessible from PC and mobile phones, while others preferred only mobile-based applications specifically designed for mobile phones or tablets.

Data Protection and Privacy

Psychotherapists have expressed concerns regarding data protection. Specifically, they worried about the adequacy of security measures in treatment applications, considering that most IMIs are exclusively available on the distribution platforms of the two biggest mobile phone operating systems.

> "*Data stored in a system with internet access could always be stolen or misused*." (T279, W, 38)

According to psychotherapists, it is often unclear who can collect patient data and for what purpose, as this is regulated by the provider of the distribution platform and not by the developer of the treatment application. As a result, third parties could potentially have access to sensitive data of patients (e.g., if a user downloads a treatment application aimed at reducing alcohol consumption).

> "*The data protection guidelines for outpatient centers are reasonably high as it has to be made sure that the data do not land on [foreign] servers. Yet, I should encourage patients to download smartphone applications from [distribution platforms], without it being made sure that [companies] do not process the information that [patient X] has panic or that [patient Y] drinks too much? From now on, I will only make use of web-based applications.*" (T204, M, 53)

Consequently, many psychotherapists have expressed their wish for robust data protection measures and transparency.

Risks and Barriers

Risks and Barriers for Psychotherapists

Psychotherapists have reported that the integration of IMIs has impacted their work with patients. Specifically, several psychotherapists mentioned a decreased locus of control and self-efficacy with the integration of IMIs in their work.

> "*Psychotherapists are not involved in the process, I could be held responsible if something goes wrong in regard to treatment errors.*" (T37, W, 56)

Many mentioned that the reason they have not integrated IMIs into their daily routine is because of reduced contact between patients and psychotherapists. They believed IMIs to be impersonal. Two potential solutions were proposed: The first was to include psychotherapists in the therapeutic process (e.g., blended therapy). The second was to include psychotherapists in the design and conceptualization of IMIs. Another frequently addressed aspect was the fear of unclear legal responsibilities when prescribing IMIs.

> *"I would be afraid that patients sue me if something does not work out the way it should."* (T168, W, 37)

Psychotherapists were worried about liability in case of emergencies and deterioration (e.g., acute crisis, suicidality). Oftentimes, insecurities about claims of recourse were a reason to eventually not use IMIs.

Risks and Barriers for Patients

Psychotherapists also raised concerns about barriers (e.g., technical requirements, age, vision impairments, somatic disorders) that could potentially hinder patients from using IMIs appropriately. In particular, a highly heterogeneous patient population, missing individualization and fit between application and patient were raised as concerns.

> "*Many older patients do not have the technical access.*" (T164, W, 28)

Another factor was the lack of therapeutic relationships in computerized treatment. Most psychotherapists argued that this may result in poor compliance and create a feeling of rejection, eventually leading to withdrawal from therapy.

"*The use of the applications among my clients has fizzled out, as the treatment motivation has drastically decreased after a few weeks.*" (T201, W, 58)

Also, especially as a standalone treatment, IMIs could provide unsuitable or misleading information or might be used inappropriately.

"*Initiating suicidality or endangerment of others could be detected too late.*" (T23, W, 40)

Psychotherapists are worried about a "*higher responsibility for the patient and the increasing isolation and deindividualization*" (T90, W, 54). When used as blended therapy, the accompanying application might overburden patients, as they would have to complete modules and spend more time practicing at home.

Discussion

This study aimed to explore psychotherapists' attitudes toward IMIs. Since psychotherapists are among the primary providers of IMIs, it is indispensable to incorporate their opinions and experiences. This will further facilitate a successful integration of such technological aid in psychotherapy. The thematic analysis generated eleven core themes, which were separated into four overarching categories: Category 1 is the Applicability of IMIs. It covers themes such as Disorder-related Limitations, Facilitating Structures, Psychotherapeutic Specialization, and Role in Mental Health care. Category 2: Treatment Resources. It has two themes, which are Lack of Information and Costs and Efforts. Category 3 is Technology. It covers themes such as Technical Constraints, Technical Requirements and Functions, and Data Protection and Privacy. Category 4: Risks and Barriers. It covers the themes Risks and Barriers a) for Psychotherapists and b) for Patients. The

opinions gathered across the different core themes included current shortcomings and barriers that hinder the use of IMIs, as well as facilitating conditions and ideas for further development.

Applicability of IMIs

The most prominent category was the psychotherapists' ideas and concerns regarding the applicability of IMIs. Here, perceived disorder-related application and associated limitations were the most prominent. Psychotherapists agreed that IMIs could be integrated into clinical practices for some therapy, especially for anxiety disorders and depression. Current meta-analyses and reviews support the effective implementations of IMIs in the treatment of anxiety disorders [21] and depression [22]. However, they also expressed concerns about using IMIs for/in the treatment of psychotic, personality, comorbid, trauma-related, and severe disorders.

While this perception may be partly supported by current research that highlights the difficulties of using IMI for certain disorders, some findings support that IMIs helped to treat severe comorbidities [34]. However, these findings also buttress the shortcomings of IMI-related research for mental disorders besides anxiety and depressive disorders [34]. To reduce the uncertainty among psychotherapists, more studies are required that focus on testing IMIs for treating these types of disorders or more complex populations. Another factor interfering with the applicability of IMIs was the uncertainty of their role in current and future mental health care, since it was not clear whether they are intended to assist or substitute in-person treatment. Many psychotherapists criticize the idea of substituting psychotherapy with treatment applications. The idea of substituting psychotherapists with treatment applications is why many are not interested in integrating IMIs into their practices. Therefore, political actors and leaders in the field of mental health care should hold a discourse to rationalize the use of IMIs in psychotherapy. Another point raised by psychotherapists that limits the applicability of IMIs is the therapeutic focus of IMIs. While most psychotherapists viewed IMIs as suitable for CBT, they doubted whether these applications could be integrated into other

psychotherapeutic interventions. Since previous research highlighted several benefits of using IMIs in different psychotherapeutic orientations [35], it could be assumed that CBT-focused IMIs can also help patients following a psychodynamic or psychoanalytic treatment. Previous research also confirmed reduced symptoms using IMIs with psychodynamic approaches [12,13]. These approaches, for example, encouraged patients to reflect on emotional conflicts associated with their symptoms [36]. Developing IMIs that integrate well into a psychodynamic or psychoanalytic treatment approach has several benefits and economic advantages; however, it should be noted that newer concepts of psychotherapy are slowly moving away from a strict school of thought and are integrating different evidence-based practices (e.g., see Cognitive Behavioral Analysis System of Psychotherapy for chronic depression [37]). This positive development will also impact the design of future IMIs. Despite this concern, some psychotherapists have reported that measures that facilitate the applicability of IMIs already exist in their working environments. This finding indicates that employers and insurance companies welcome the use of IMIs in the mental health sector. However, psychotherapists seek additional support.

Treatment Resources

Regarding the second most frequently addressed category “Treatment Resources” and its associated core themes, the results overwhelmingly indicate that there is a perceived lack of information regarding IMIs. A potential reason is that psychotherapists might lack confidence in IMIs, even if they were to try them. They stated that anticipated costs and efforts outweigh the perceived benefits of IMIs in psychotherapy. To address this problem, they suggested that psychotherapists should be compensated for the initial training and the supervision of patients when using IMIs. They also suggested overarching platforms or reimbursed seminars, where they could easily access the information needed. Psychotherapists raised concerns about the scientific foundation of IMIs in mental health care. A potential reason is that certain IMIs are validated only based on the research

conducted by the company or associated researchers [38]. Although studies have confirmed the benefits of IMIs for patients, for example, reducing symptom severity [2,9,10,11], more research should be conducted by independent institutions to validate the use of IMIs. Another reason suggested by psychotherapists is the perceived lack of scientific foundation. This might be because study results are not readily communicated to practicing psychotherapists. To bridge this possible science-practitioner gap, this study highlights the need for relevant information and training to be made more readily accessible.

Technology

The technological aspects of IMIs and the according core themes formed the third category. This category contains themes that indicate the technical shortcomings and past experiences of psychotherapists with IMIs. Psychotherapists expressed that the availability of high-quality IMIs is crucial to successfully integrate IMIs into their therapeutic practices, comparable to previous qualitative investigations on blended therapy in a German sample [20]. Also, it was important for psychotherapists to have the option to tailor the content of IMIs to the needs of specific patients rather than prescribing them as a one-fits-all application, as emphasized by previous literature [25]. While psychotherapists arguably had many ideas about IMIs' configurations, they criticized those concepts are not sufficiently represented in the application.

Another crucial concern was data protection and the need to ensure patients' privacies. Currently, in Germany, where the survey was conducted, the data protection guidelines for software developers of digital health applications are relatively high. For example, they cannot contain third-party advertisements [39]. However, downloading an IMI reveals sensitive patient information to the distribution platform. This indicates the need for a centralized IMI distribution platform so that broader privacy issues are not regulated by third parties [39].

Risks and Barriers

The fourth category of core themes, “Risks and Barriers”, consisted of hindering and potentially malevolent factors that the surveyed psychotherapists associated with the use of IMIs, either affecting themselves or their patients, or both. Many stated that this might make psychotherapy impersonal, resulting in a loss of its efficacy, as interpersonal factors such as the therapeutic relationship were crucial to the success of psychotherapy [40]. The results of the current study also indicate that the barriers that psychotherapists associate with the use of IMIs are similar to those previously established in a systematic review of studies that focused on barriers to conventional clinical practice [41]. In these studies, lack of knowledge, attitudes towards IMIs’, and legal and resource-related factors were the limiting factors for professionals. To study the impact of using IMIs, it is crucial to incorporate an assessment for adverse events and unwanted treatment reactions in future clinical trials regarding the efficacy of IMIs [42].

Limitations

This study comprehensively portrayed the multi-sided attitudes of psychotherapists towards IMIs in mental health care. However, there are some limitations. Firstly, the sample consisted mainly of CBT-licensed psychotherapists (86.6%), which implies that other psychotherapeutic orientations, such as psychoanalysis (2.6%), were underrepresented. The unrestricted sampling procedure might be a reason for this observation since the sample mainly consisted of specific psychotherapeutic orientations who were generally interested in IMIs. Secondly, the majority of the sample has not had previous experience with IMIs (63.1%). This reveals that many of the responses are concerns or potential advantages of IMIs that might not be based on actual experiences from mental health care practices. Future study samples should contain more heterogeneous psychotherapeutic orientations or solely with psychotherapists who have experience in using IMIs to compare the present findings. The presented results reflect opinions gathered bottom-up and analyzed in an exploratory manner.

Therefore, it has no claim to represent any scientifically proven relationships between entities. This study was conducted in Germany, where IMIs have recently been introduced to the healthcare system as digital health applications that are available on prescription [43]. The results of this study only apply to the German context and, therefore, cannot be generalized. Thirdly, the answers were obtained anonymously from an online survey, where there was no possibility of clarifying the meaning of the questions or for further inquiry by the researchers. In-depth expert interviews with psychotherapists with profound experience and knowledge from utilizing IMIs could yield interesting findings in the future. Such studies could potentially reveal how to develop future IMIs and their associated working mechanisms both in clinical practice and research. As perceived risks for patients may differ depending on the stakeholder's perspective, consulting patients' opinions to provide critical details in tackling actual risks should be indispensable.

Conclusion

The present study provides a comprehensive insight into the attitudes of psychotherapists toward IMIs. This aspect of psychotherapy has been less investigated, particularly the efficacy of specific IMIs in reducing psychiatric symptoms. The acceptability of IMIs, not only by patients but also by psychotherapists, can successfully be achieved by carefully considering the opinions of all stakeholders involved in psychotherapeutic treatment. Regarding the four overarching categories, "Treatment Resources", "Technology", "Applicability of IMIs", and "Risks and Barriers", several substantial implications were derived: Many psychotherapists welcomed IMIs as a new tool to support conventional psychotherapy (e.g., blended therapy) to treat mental disorders but were skeptical when it comes to using IMIs as a substitute for psychotherapy. Currently, unresolved technological issues and perceived lack of data protection hinder the use of IMIs. Since several factors (i.e., rationale of therapy or specific disorder-applicability) potentially influence the efficacy of IMIs, it is substantial to promote future research on boundary conditions of IMI-use (e.g., to

develop robust (contra-)indications). Also, health insurance companies and other stakeholders should find a way to reimburse training programs and supervision to relieve psychotherapists of the training cost and time spent researching. It could additionally be substantial to find better ways to make recent research findings readily available to practicing psychotherapists and to integrate them into the conceptualization of new IMIs.

The increasing use of IMIs in recent years comes with several benefits, opportunities and facilitating conditions, but also risks, as shown in this study regarding practicing psychotherapists. While IMIs are an integral part of today's psychotherapeutic healthcare system, it is crucial to maintain an ongoing dialogue between insurance companies, developers, therapists, and patients to address emerging needs and concerns and ultimately improve the effectiveness of IMIs. However, it must be clearly stated that IMIs are only a support for the therapeutic process and not a panacea for the increasing cases of mental illnesses or the insufficient number of licensed therapists. Further health policy decisions are certainly needed beyond the scope of this study and the use of IMIs. The current study should, therefore, be understood as a contribution to psychotherapeutic care. It is only one of many steps to sustainably improving psychotherapeutic treatment options for affected individuals.

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(1) All authors contributed to the conception and design of the study. (2) LM and AM recruited the participants and collected the data. (3) ASH and JP coded and analyzed the data. (4) ASH, JP, AM, KR, and TK drafted the article and revised it for important intellectual content. (5) All authors approved the final version of the manuscript before submission.

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Conflict of Interest

The authors declare no conflict of interest.

Abbreviations

AP: Analytic psychotherapy
CBT: Cognitive behavioral therapy
e.g.,: for example
IMI: Internet- and mobile-based interventions
M = mean
n = sample size
PD: Psychodynamic therapy
SD = standard deviation**.**

Data availability statement:

The data supporting these findings are available on request from the corresponding author.

Use of generative AI

No generative AI was used in any portion of the manuscript writing.

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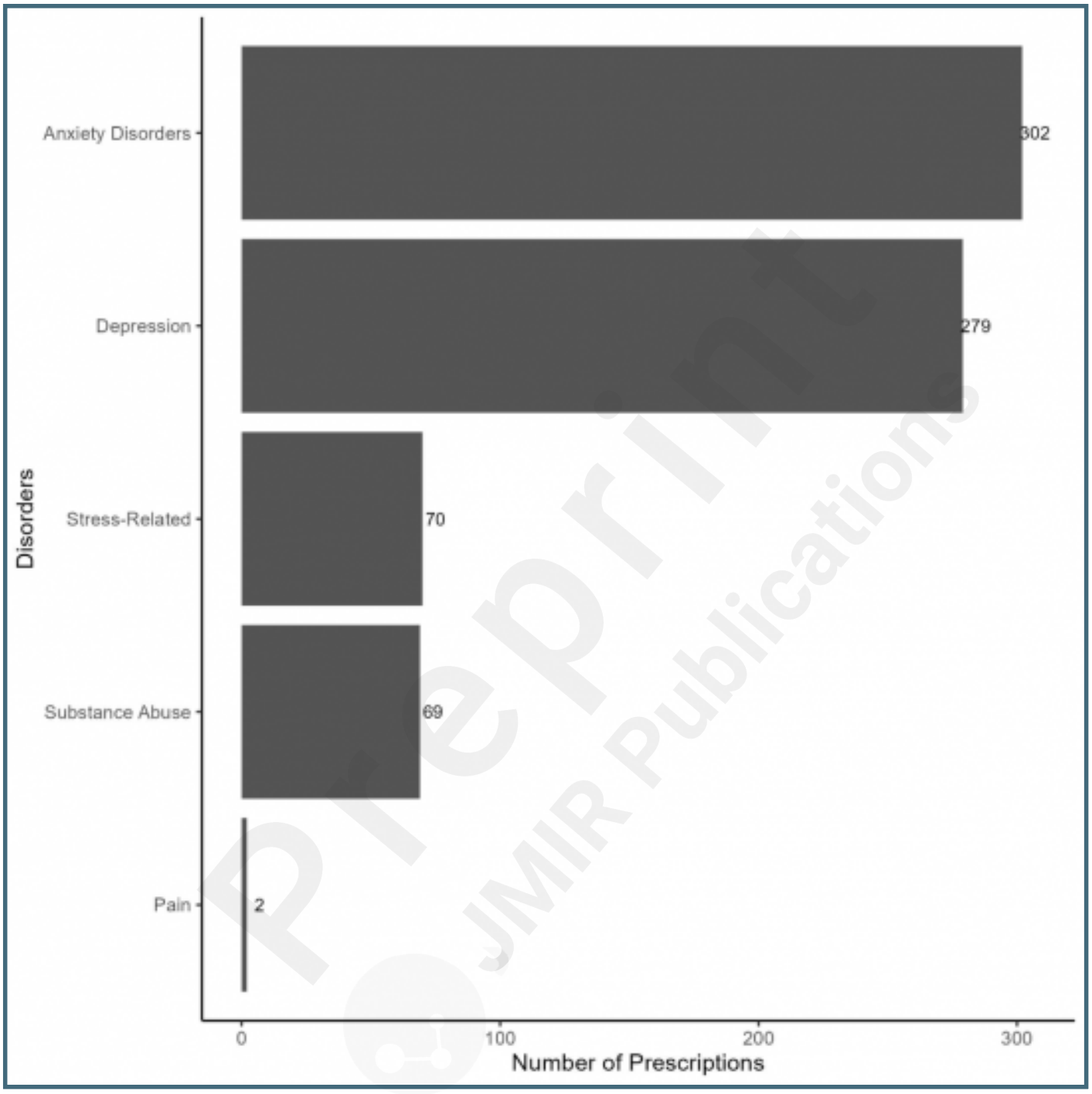
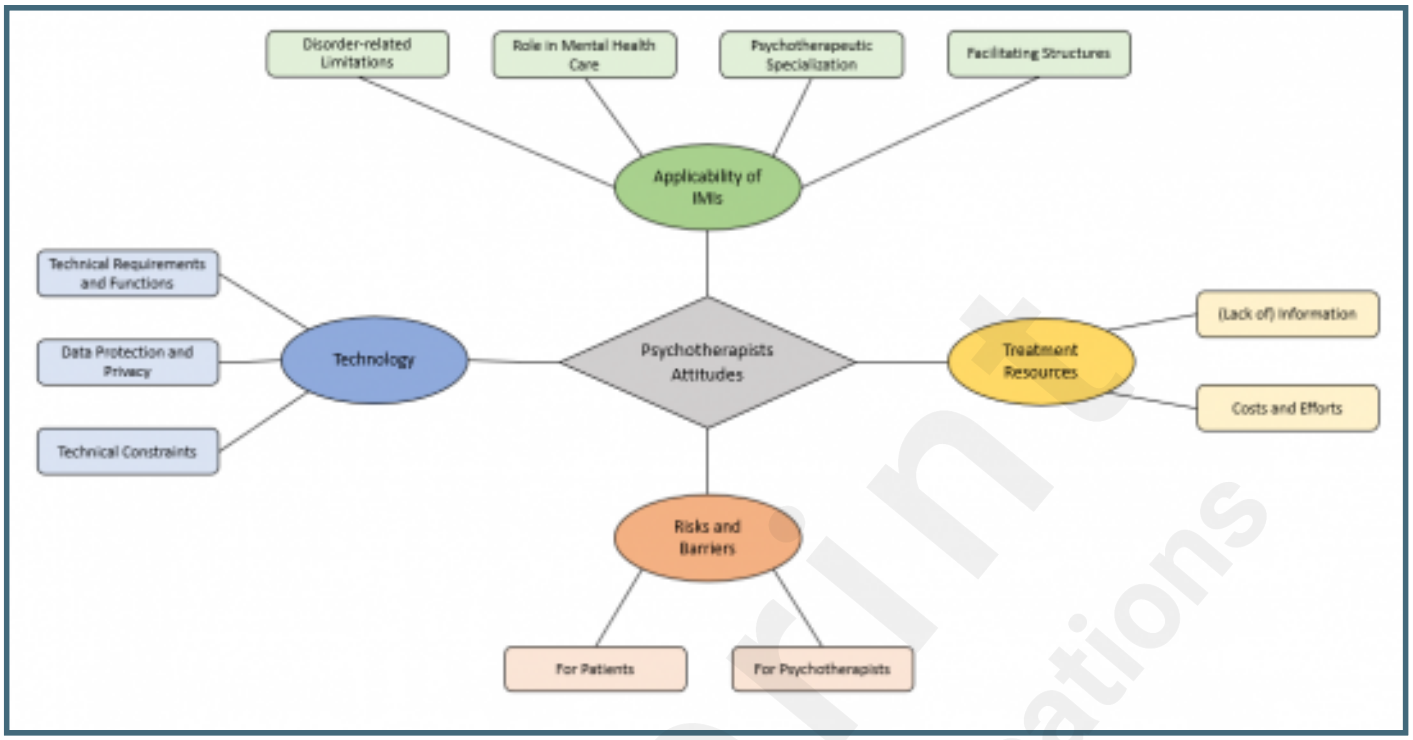
Supplementary Files

Figures

Number of prescriptions by disorder.



A thematic map of the 4 categories and the respective core themes.



Multimedia Appendixes

Supplementary Material.
URL: http://asset.jmir.pub/assets/6f17b71534bdfe8b3449aa3a8b064c64.docx

CONSORT (or other) checklists

COREQ-Checklist.
URL: http://asset.jmir.pub/assets/dfa3de1cdccdddbf9fe868fe76f4af70.pdf